

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Canceled)
2. (Currently amended) An on-vehicle electronic apparatus ~~according to claim 1~~

comprising:

a wireless communication unit that makes a wireless communication via a wireless LAN;
means for acquiring travel information from vehicles around a self vehicle using the
wireless communication unit; and
means for taking a collision avoidance measure on the basis of the acquired travel
information,

wherein the means for acquiring ~~the~~ travel information[[,]] comprises:

means for acquiring position information and velocity information ~~each~~ indicating positions and velocities of vehicles before and after the self vehicle using the wireless communication unit; and

means for calculating inter-vehicle distances between the self vehicle[[,]] and the vehicles before and after the self vehicle with reference to map information on the basis of the acquired position information and velocity information, and

wherein the means for taking the collision avoidance measure takes the collision avoidance measure when the calculated inter-vehicle distances are not more than a predetermined distance, and the velocities of the self vehicle and the vehicles before and after the self vehicle are not less than a predetermined velocity.

3. (Currently amended) An apparatus according to claim 2, wherein the means for acquiring the position information and velocity information[[,]] comprises:

means for acquiring position information and velocity information of vehicles around the self vehicle using the wireless communication unit; and

means for selecting position information and velocity information of the vehicles before and after the self vehicle from the acquired position information and velocity information of the vehicles around the self vehicle on the basis of the map information.

4. (Currently amended) An apparatus according to claim 2, wherein the means for calculating the inter-vehicle distances[[,]] comprises:

means for determining positions on a map on the basis of the acquired position information[[,]] and position information of the self vehicle; and

means for calculating the inter-vehicle distances on the basis of the determined positions on the map with reference to the map information.

5. (Canceled)

6. (Currently amended) An on-vehicle electronic apparatus ~~according to claim 5~~
comprising:

means for acquiring travel information of a travel group including a self vehicle; and

means for informing a driver of information of the travel group on the basis of the
acquired travel information,

wherein the means for acquiring the travel information[[,]] comprises:

means for acquiring position information and velocity information ~~each~~ indicating
positions and velocities of foremost and rearmost vehicles of the travel group including the self
vehicle, and of at least one vehicle that ~~which~~ is included in the travel group and serves as a
wireless transponder using a wireless LAN of vehicles included in the travel group;

means for calculating a length of the travel group using map information on the basis of
the acquired position information indicating the positions of the foremost and rearmost vehicles;

means for calculating a distance from the foremost vehicle of the travel group to the self
vehicle using the map information on the basis of the acquired position information of the
foremost vehicle and the acquired position information of the self vehicle; and

means for calculating a time required until the self vehicle leaves the travel group, on the
basis of the acquired velocity information of the respective vehicles and the calculated distance,
and

wherein the means for informing the information of the travel group informs the driver of
the self vehicle of the calculated length of the travel group and the calculated time.

7. (Currently amended) An apparatus according to claim 6, wherein the means for acquiring the position information and velocity information[[,]] comprises:

means for acquiring position information and velocity information of vehicles around the self vehicle;

means for selecting foremost and rearmost vehicles of a wireless area of the self vehicle with reference to the map information on the basis of the acquired position information and velocity information of the vehicles around the self vehicle;

means for outputting, to the selected vehicle, a command for acquiring position information and velocity information of the foremost and rearmost vehicles of the travel group including the self vehicle, and of the at least one vehicle that ~~which~~ is included in the travel group and serves as the wireless transponder; and

means for receiving the position information and velocity information of the foremost and rearmost vehicles of the travel group, and the at least one vehicle that ~~which~~ is included in the travel group and serves as the wireless transponder in response to the command.

8. (Original) An apparatus according to claim 6, wherein the means for calculating the time, comprises:

means for calculating an average velocity of the velocities indicated by the acquired velocity information of the respective vehicles included in the travel group; and

means for calculating the time by dividing the calculated distance by the average velocity.

9. (Currently amended) An apparatus according to claim 7, further comprising:

means for acquiring position information and velocity information of vehicles around the self vehicle in response to the command from another on-vehicle electronic apparatus;

means for selecting a vehicle closest to a vehicle, which issued the command, with reference to the map information on the basis of the acquired position information and velocity information of the vehicles around the self vehicle; and

means for transmitting, to the selected vehicle, a packet ~~which contains~~ containing the acquired position information and velocity information of the vehicles around the self vehicle.

10. (Currently amended) An apparatus according to claim 9, further comprising:

means for checking if the self vehicle is a foremost or rearmost vehicle of the travel group, after the packet is transmitted;

means for, when it is determined that the self vehicle is not the foremost or rearmost vehicle, acquiring the position information and velocity information of the vehicles around the self vehicle using the wireless LAN;

means for selecting a foremost or rearmost vehicle of the wireless area of the self vehicle with reference to the map information on the basis of the position information and velocity information of the vehicles around the self vehicle; and

means for outputting, to the selected vehicle, a command for acquiring the position information and velocity information of the foremost and rearmost vehicles of the travel group including the self vehicle, and of the at least one vehicle that ~~which~~ is included in the travel group and serves as the wireless transponder.

11. (Currently amended) An apparatus according to claim 9, further comprising:
- means for receiving a packet ~~which contains~~ containing position information and velocity information of a transmission source from another on-vehicle electronic apparatus;
- means for, when a transmission destination of the received packet is not the self vehicle, acquiring position information and velocity information of vehicles around the self vehicle;
- means for selecting a vehicle closest to the transmission destination with reference to the map information on the basis of the acquired position information and velocity information of the vehicles around the self vehicle; and
- means for transferring the received packet to the selected vehicle.

12. (Canceled)

13. (Currently amended) An on-vehicle electronic apparatus comprising:

means for receiving a packet ~~which contains~~ containing information indicating a position of a transmission destination and information to be transmitted to the transmission destination, from another on-vehicle electronic apparatus;

means for, when the packet is received, checking if connection with the transmission destination indicated by the information contained in the packet can be established using a wireless LAN;

means for, when the connection can be established, transmitting the information to be transmitted to the transmission destination, which is contained in the packet, to the transmission destination using the wireless LAN;

means for, when the connection cannot be established, acquiring position information and velocity information of vehicles around a self vehicle using the wireless LAN;

means for selecting a vehicle closest to the transmission destination with reference to map information on the basis of the acquired position information and velocity information of the vehicles around the self vehicle, and the information that ~~which~~ is contained in the packet and indicates the position of the transmission destination; and

means for transmitting the packet to the selected vehicle using the wireless LAN.

14. (Currently amended) An apparatus according to claim 13, further comprising

means for transmitting a packet ~~which contains~~ containing information indicating a position of a transmission destination and information to be transmitted to the transmission destination.

15. (Canceled)

16. (Currently amended) A collision avoidance method for an on-vehicle electronic apparatus, comprising:

acquiring position information and velocity information ~~each~~ indicating positions and velocities of vehicles before and after a self vehicle using a wireless communication unit that ~~which~~ makes a wireless communication via a wireless LAN;

calculating inter-vehicle distances between the self vehicle~~[[,]]~~ and the vehicles before and after the self vehicle with reference to map information on the basis of the acquired position information and velocity information; and

taking a collision avoidance measure when the calculated inter-vehicle distances are not more than a predetermined distance, and the velocities of the self vehicle and the vehicles before and after the self vehicle are not less than a predetermined velocity.

17. (Currently amended) A traffic jam information notification method for an on-vehicle electronic apparatus, comprising:

acquiring position information and velocity information each indicating positions and velocities of foremost and rearmost vehicles of a travel group including a self vehicle, and of at least one vehicle that ~~which~~ is included in the travel group and serves as a wireless transponder using a wireless LAN of vehicles included in the travel group;

calculating a length of the travel group using map information on the basis of the acquired position information indicating the positions of the foremost and rearmost vehicles;

calculating a distance from the foremost vehicle of the travel group to the self vehicle using the map information on the basis of the acquired position information of the foremost vehicle and position information of the self vehicle;

calculating a time required until the self vehicle leaves the travel group, on the basis of the acquired velocity information of the respective vehicles and the calculated distance; and

notifying a driver of the self vehicle of the calculated length of the travel group and the calculated time.

18. (Currently amended) An information transmission method for an on-vehicle electronic apparatus, comprising:

checking if a packet which contains information indicating a position of a transmission destination and information to be transmitted to the transmission destination is received from another on-vehicle electronic apparatus;

checking, when the packet is received, if connection with the transmission destination indicated by the information contained in the packet can be established using a wireless LAN;

transmitting, when the connection can be established, the information to be transmitted to the transmission destination, which is contained in the packet, to the transmission destination using the wireless LAN;

acquiring, when the connection cannot be established, position information and velocity information of vehicles around a self vehicle using the wireless LAN;

selecting a vehicle closest to the transmission destination with reference to map information on the basis of the acquired position information and velocity information of the vehicles around the self vehicle, and the information ~~that~~ ^{which} is contained in the packet and indicates the position of the transmission destination; and

transmitting the packet to the selected vehicle using the wireless LAN.

19. (Canceled)

20. (New) An on-vehicle electronic apparatus comprising:

means for receiving a packet containing information indicating a position of a transmission destination and information to be transmitted to the transmission destination from a first on-vehicle electronic apparatus using a wireless LAN; and

means for transmitting the received packet to a second on-vehicle electronic apparatus using the wireless LAN.

21. (New) An apparatus according to claim 20, wherein the second on-vehicle electronic apparatus is closest to the transmission destination of on-vehicle electronic apparatuses around the self vehicle.

22. (New) An apparatus according to claim 20, wherein the transmitting means comprises

means for checking if connection with the transmission destination indicated by the received packet can be established using the wireless LAN; and

means for, when the connection can be established, transmitting the packet to the transmission destination.

23. (New) An apparatus according to claim 22, wherein the transmitting means comprises

means for, when the connection cannot be established, acquiring position information and velocity information of vehicles around the self vehicle using the wireless LAN; and

means for obtaining the second on-vehicle electronic apparatus closest to the transmission destination based on the acquired position information and velocity information of vehicles around a self vehicle using the wireless LAN.

24. (New) An apparatus according to claim 23, wherein the second on-vehicle electronic apparatus is obtained with reference to map information based on the acquired position information and velocity information of vehicles around the self vehicle.

25. (New) An information transmission method for on-vehicle electronic apparatus, comprising:

receiving a packet containing information indicating a position of a transmission destination and information to be transmitted to the transmission destination, from a first on-vehicle electronic apparatus using a wireless LAN; and

transmitting the received packet to a second on-vehicle electronic apparatus using the wireless LAN.

26. (New) A method according to claim 25, wherein the transmitting comprises:
checking if connection with the transmission destination indicated by the received packet
can be established using the wireless LAN; and
transmitting the packet to the transmission destination when the connection can be
established.

27. (New) A method according to claim 26, wherein the transmitting comprises:
acquiring position information and velocity information of vehicles around a self vehicle
using the wireless LAN when the connection cannot be established; and
obtaining the second on-vehicle electronic apparatus closest to the transmission
destination based on the acquired position information and velocity information of vehicles
around the self vehicle using the wireless LAN.

28. (New) A method according to claim 27, wherein the second on-vehicle electronic
apparatus is obtained with reference to map information based on the acquired position
information and velocity information of vehicles around a self vehicle.